

**In the Claims:**

The following claims have been amended:

3. (Amended) A method according to claim 1, characterised in that the subsequent di-hydrate is formed into pellets.

8. (Amended) A method according to claim 5, characterised in that the calcining is hydrothermal to form  $\alpha$  calcium sulphate hemi-hydrate.

12. (Amended) A method according to claim 5, characterised in that the calcining is carried out in dry heat conditions.

15. (Amended) A method according to claim 8, characterised in that the calcining is carried out for a period of a half to six hours.

17. (Amended) A method according to claim 5, characterised in that following calcining, the calcium sulphate hemi-hydrate is ground to a powder.

19. (Amended) A method according to claim 1, characterised in that the initial calcium sulphate di-hydrate is formed by mixing soluble calcium and sulphate salts such that calcium sulphate precipitates out.

21. (Amended) A method according to claim 19, characterised in that the calcium salt is a chloride.

22. (Amended) A method according to claim 19, characterised in that the calcium salt is a nitrate.

23. (Amended) A method according to claim 19, characterised in that the sulphate is a sodium salt.

24. (Amended) A method according to claim 19, characterised in that the sulphate is a potassium salt.

25. (Amended) A method according to claim 19, characterised in that the sulphate is an ammonium salt.

26. (Amended) A method according to claim 19, characterised in that the calcium and sulphate salts are provided in a substantially equal molecular ratio.

27. (Amended) A method according to claim 1, characterised in that the initial calcium sulphate di-hydrate is formed from neutralising lime with sulphuric acid.

28. (Amended) A method according to claim 1, characterised in that the dehydration of the initial calcium sulphate di-hydrate takes place within a temperature range 110-350°C.

30. (Amended) A method according to claim 1, characterised in that the dehydration of the initial calcium sulphate di-hydrate takes place at a temperature above 350°C to form insoluble anhydrite.

32. (Amended) A method according to claim 1, characterised in that the dehydration of the initial calcium sulphate di-hydrate by the application of heat takes place in an open container.

33. (Amended) A method according to claim 1, characterised in that the dehydration of the initial calcium sulphate di-hydrate by the application of heat takes place in a closed container.

34. (Amended) A method according to claim 1, characterised in that the dehydration of the initial calcium sulphate di-hydrate by the application of heat takes place hydrothermally in the presence of steam.

35. (Amended) A method according to claim 1, characterised in that the rehydration of the calcium sulphate anhydrite takes place immediately following dehydration.

36. (Amended) A method according to claim 1, characterised in that the calcium sulphate anhydrite is fully immersed in water for rehydration.

37. (Amended) A method according to claim 1, characterised in that the calcium sulphate anhydrite is fully immersed in a dilute salt solution for rehydration.

*all*  
*sub A*  
40. (Amended) A method according to claim 37, characterised in that the concentration of the salt solution is less than 1%.

*A12*  
*sub A*  
42. (Amended) A method according to claim 1, characterised in that finely powdered calcium sulphate di-hydrate is added to be present during rehydration such that the powdered calcium sulphate acts as crystal seeds.

44. (Amended) A method according to claim 28, characterised in that the rehydration takes less than five days.

*A13*  
45. (Amended) A method according to claim 1, characterised in that the subsequent calcium sulphate di-hydrate is dried following crystallisation.

*sub A*  
46. (Amended) A method according to claim 8, characterised in that the subsequent calcium sulphate di-hydrate is held in a damp condition prior to calcining.

Please cancel claim 47 without prejudice or disclaimer.